

## Industrial microwave equipment manufacturers

The domestic equipment registration of microwave equipment enterprises was first registered in 1993. Today, 25 years later, the scale of the microwave equipment industry has reached 1,000+, involving more than 100 enterprises producing microwave drying equipment for the research and development of food industry. Industrial Microwave Systems Co Ltd. is the only listed company in the industry with an annual output value of about 100 million yuan; the annual output value of medium-sized microwave equipment manufacturers is about 20 million; The annual output value of small microwave equipment manufacturers ranges from several hundred thousand to several million. Industrial Microwave Systems Co Ltd. produces industrial microwave equipment, hot air new energy equipment, intelligent conveying equipment and various automated production lines for a wide range of industries such as food, agricultural and sideline products, pharmaceuticals, chemicals, metallurgy, building materials, powders, laboratory instruments and many other industries. Industrial Microwave Systems Co Ltd. was rated as "Shandong Famous Brand Product" and "Leader" trademark was rated as Shandong Famous Trademark.

Industrial Microwave Systems Co Ltd. is a representative of industry, academia and research cooperation. The company has established cooperation and exchanges with universities such as Tsinghua University, Zhengzhou University, Zhengzhou Institute of Light Industry, Zhengzhou Aviation Industry Management College, People's Liberation Army Information Engineering University and Henan University of Technology. Relationships, the two sides are highly shared in terms of personnel, projects, laboratory resources, etc., and the influence in the domestic industrial microwave application research and equipment manufacturing field is increasing.

The company has strong technical strength, and has successfully completed the "Development and Application of Microwave Dry Diamond Micropowder Equipment", "Development and Application of New Technology Equipment for Rose Microwave Hot Air Composite Drying", "Development and Application of New Technology and Equipment for Microwave Drying of Red Date" ", "Multi-layer continuous pill microwave drying sterilization technology equipment development and application", "multi-layer continuous vacuum microwave drying new process equipment development and application" and other research and development projects and through the provincial scientific and technological achievements identification, obtained a number of Provincial Science and Technology Progress Award, with 12 invention patents and 366 utility model patents.

With the industrial microwave equipment as the core, Boda Company specializes in designing and manufacturing the entire drying equipment production line, including microwave drying equipment, microwave dryer, microwave drying equipment, microwave sterilization equipment, high temperature muffle furnace, hot air circulation oven and heat pump. Complete industrial automation production line equipment such as dryers, drying rooms, and supporting conveying machinery. It is sold well in all regions of the country and in the United States, South Korea, Malaysia, Australia, Thailand, Vietnam, Indonesia, the Philippines, Libya, Pakistan and other countries. Representative customers of Boda microwave production line are: Beijing Tongrentang, Henan, I miss you jujube industry, Hubei Nishi International Rose Group, Zhongnuo Pharmaceutical, Ronglida Food, Shijiazhuang Group, Bayi Chemical, Yunnan Energy Investment, Shenhong Group , Zhongnan Diamond, Xuchang Shan State and other microwave

production lines.

In the past decade, Western Europe has been in the field of microwave energy applications. Germany's Linn.Co company is involved in the development of microwave industrial applications. As the world's microwave food applications are at a low tide, they quickly launched a microwave oven processing equipment that processes 300 kilograms per hour at 20KW/915MHZ; and launched 30 in the field of microwave high-temperature sintering. The preheating, drying and high-temperature sintering equipment of the –60KW / 2450MHZ series of large-scale ceramic products mark its huge industrialization capability.

In recent years, FM-MicroTech. GmbH Ltd. has also introduced 400KW/915MHZ microwave wood continuous bonding molding equipment, 64KW/915MHZ microwave hot air combination, continuous honeycomb comb or ceramic foam drying equipment, and 28-56X 1KW series. Microwave conveyor and so on.

Australia is represented by AMT company. In recent years, it has developed “microwave solution chemical processing system, 100KW/915MHZ large bundle wool microwave heating treatment system, processing 180KG per hour. 6KW/2450MHZ microwave ceramic high temperature sintering furnace, the highest temperature can reach 1800oC 5–15KW / 2450MHZ Microwave Rubber Vulcanization System, 1KW/2450MHZ Microwave Plasma Torch Welding System, etc.

The famous American CEM Microwave Instrument Company, Italy's MILESTONE Company, Australia's CSIRO Company, etc. are all committed to the development and development of various commercial microwave chemical systems, and have not only introduced various automatic microwave digestion, solution extraction, chemical reaction and even high temperature. Microwave muffle furnace, and also introduced a continuous flow microwave chemical reaction system, so that the scale of synthetic products reaches the order of several kilograms, greatly promoting the development of microwave chemistry. In the emerging cross-disciplinary field of microwave chemistry, according to the current development trend of theory and practice, if you can enter the traditional large-scale chemical engineering system in the future, the development prospects are limitless.

In 1995, Dennis Tool Company of the United States purchased the patent for microwave high-temperature sintering cemented carbide technology from the Materials Research Laboratory of Pennsylvania State University and began to produce microwave high-temperature continuous sintering equipment. This equipment has sold more than a dozen sets before 2002. With this continuous microwave sintering equipment, sintering of cemented carbide materials can be completed in four hours.

At present, the largest continuous microwave sintering equipment production capacity is 650 kg per day, which is much higher than that of the ordinary atmosphere sintering furnace. The power consumption of the device is only 20 kW.

MicroWear of Canada, which built a production center for the manufacture of silicon nitride ceramic knives using microwave sintering in 1995, using five intermittent atmospheric microwave sintering furnaces to produce more than 20,000 and a half inch silicon nitride ceramics per day. The blade only requires two production workers.

Japan introduced a large-scale microwave high-temperature sintering equipment that can be practically applied to the ceramic industry around 2000. The installed capacity of the equipment is more than 20 kW. The maximum microwave output power of a continuous microwave high-temperature sintering tunnel kiln is 80 kW and 14 meters long. The firing temperature is 1400 °

C, and the firing temperature of the microwave bell jar kiln equipped with multi-tube system can reach 1650 degrees.

The microwave-assisted gas tunnel kiln developed by EA Technologies of the United Kingdom has a total length of 15 meters. There are 23 kiln cars that can be loaded with 200kg. There are 18 gas nozzles with a total power of 50kW. The maximum total power of the 896MHz microwave source is 120kW. 1600 ° C.

At present, China's industrial microwave energy equipment manufacturers are mainly concentrated in Guangdong, Henan, Hunan, Jiangsu, Sichuan, Beijing and other places. Its products have been widely used in agricultural and sideline, textile, chemical, ceramic, rubber, wood and medical fields.

They have played a major role in transforming traditional heating, drying, sterilization, baking, puffing, curing, catalysis, vulcanization, etc., and have achieved significant improvements in product quality, energy conservation, process consumption reduction and environmental pollution improvement. Economic and social benefits.